

**PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID)  
CONCEPT STAGE**

Report No.:PID0019451

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<b>Program Name</b>	Delta Rural Sanitation Program (DRSP)
<b>Region</b>	Middle and North Africa Region
<b>Country</b>	Arab Republic of Egypt
<b>Sector</b>	GWADR
<b>Lending Instrument</b>	Program-for-Results
<b>Program ID</b>	P154112
<b>Borrower(s)</b>	Ministry of International Cooperation
<b>Implementing Agency</b>	Ministry of Housing, Utilities and Urban Communities
<b>Date PID Prepared</b>	January 8, 2015
<b>Estimated Date of Appraisal Completion</b>	April 29, 2015
<b>Estimated Date of Board Approval</b>	June 30, 2015
<b>Concept Review Decision</b>	January 14, 2015 {Insert the following} Following the review of the concept, the decision was taken to proceed with the preparation of the operation.

**I. Introduction and Context**

**A. Country Context**

Despite great strides made in the past three decades on a number of important social indicators, economic progress has been highly uneven and lagged behind progress in other middle income countries. Combined with a rapidly growing population and labor force, the average per capita growth has been limited to around 2 percent per year since 1980, reflecting a decline in investment rates, low and undiversified exports, low labor force participation and employment rates, and weak firm dynamics. Although growth rates accelerated to over 7 percent per year in 2007-08, the 2008 global financial crisis and rising food prices stalled Egypt's strong economic performance and annual growth rates fell to a more modest 4.7-5.1 percent in 2009 and 2010. After the Egyptian Revolution in 2011, and the ensuing political turmoil and civil unrest, tourism plummeted and annual growth rates fell to about 2 percent (1.8% in 2010/11, 2.2% in 2011/2012 and 2.1% in 2012/2013). Growth is beginning to rebound, reaching 3.7 percent in the last quarter of FY14. Unemployment has stabilized at 13.3 percent, but remains considerably above the pre-2011 figure of 9 percent, and is particularly high for women and for youth.

In spite of moderate to robust economic growth during the 2000s, poverty rates have increased. Between 2005 and 2010, poverty increased by nearly 5 percentage points, from nearly 20 percent to 24.3 percent. In addition, the observed increase in poverty and decrease in the income of the bottom 40 percent reflect that GDP growth did not translate into household income growth. In other words, economic growth has not trickled down to the poor. The sharp economic downturn since 2011 has most likely worsened the situation for the poor, although recent poverty data are

not entire comparable with earlier data. In addition, a significant portion of the Egyptian population remains vulnerable to falling into poverty. In 2010, 18 percent of the population was just above the poverty line. Sharp increases in food prices in 2008 showed a significant increase in the poverty headcount (from 18.9 to 21.6 percent in one year), demonstrating the vulnerability of many Egyptian households.

Regional and rural-urban welfare disparities are an enduring feature of poverty in Egypt. Poverty has been consistently highest in Upper Rural Egypt, which accounts for a quarter of the population but over half of the country's poor. Lower Urban and Metropolitan Egypt have had the lowest rates of poverty although the latter did experience the highest increase in poverty rates between 2005 and 2010. Lower Rural Egypt falls in the middle and is in fact the only region where the poverty headcount rate has effectively stayed constant from 2005 to 2010, decreasing only marginally from 16.7 to 16.0 percent. The bottom 40 percent of Egyptian households is concentrated in rural regions where access to basic services is below national averages, while the current public spending structure is exacerbating inequities. Rural regions have significantly lower coverage rates in education, health, water, waste disposal, and sanitation. Child malnutrition, for example, which includes stunting and is linked to inadequate sanitation, has worsened throughout the country and is particularly worrisome in rural areas. Therefore, enhanced inclusion through service delivery is a development priority for rural Egypt.

### ***B. Sectoral and Institutional Context of the Program***

In the last two decades, Egypt has made significant progress in providing direct access to safe piped drinking water at the household level (from 39% to 93%) and basic sanitation services through traditional septic tanks (from 52% to 93%).<sup>1</sup> Yet, access to improved services is uneven and stark geographical and socio-economic disparities persist affecting the living conditions and health of millions of Egyptians, including millions of children exposed to insanitary environmental conditions. In rural poor households, children are 8.7 times more likely to drink from unsafe sources of water that are open or located a half hour's round trip from their home than children who live in urban households, and 6% of women and girls spend significant time collecting water, in some cases up to five or six hours a day. In addition, urban and rural disparities related to the distribution of the public sewage system are prevalent. An estimated 89% of households in urban areas are covered by a public sewer system compared to only 37% in rural areas, where 42 million people are underserved and often faced with overflowing sewage from traditional septic tanks. Only 6% of Egyptian villages are provided with wastewater treatment as a service. Children in rural households are 8.5 times more likely than their urban peers to have no toilet facilities and nearly 10% of households in rural areas use shared toilet facilities. Consequently, lack of access to safe water and proper sanitation services coupled with low level of good hygiene practices lead to the spread of water related diseases, significantly impacting children's health and nutrition. It is estimated that around 9.1% of the mortality of children under-five years is due to acute diarrhea.

Less than half of the total population in the country has access to conventional sewerage systems. The rate of sewerage connection varies, with impressively high rates (more than 90%) in some

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<sup>1</sup> Egypt Network for Integrated Development: Rural Sanitation in Egypt, Policy Brief 010 (2013); [http://enid.org.eg/Uploads/PDF/PB10\\_rural\\_sanitation.pdf](http://enid.org.eg/Uploads/PDF/PB10_rural_sanitation.pdf)

cities, such as Cairo, to about 15% in rural areas. Today, around 85% of rural areas in Egypt do not have public sanitation networks. With increased water use, the traditional bayaras (sanitation trenches used as septic tanks) are failing, particularly in the Nile Delta, where the water table is high and soil has low percolation. In many villages, this situation is leading to sewage in the streets and, in some areas, to the collapse of houses. Households must pay LE 30–200 every month to empty their septic tanks, which in many cases largely exceeds the costs that households would pay for more conventional sanitation solutions. Most septic emptying services are informal, privately operated, and unregulated; they dispose of their waste directly into drains and sometimes even into canals designed to carry water for irrigation. As a result, Egypt's water resources are increasingly polluted and the health of millions of Egyptians is at risk. The situation is particularly critical in villages along the Nile River and its many branches and distributaries, which are the lifeline of the country supplying water to tens of millions of people.

The Government of Egypt is strongly committed to increasing access to rural sanitation and has made this a national priority as best evidenced by the recent launching of the new “mega” National Rural Sanitation Program (NRSP), which this proposed operation will support. The NRSP focuses on rehabilitating, extending and completing existing treatment plants; clustering villages so that networks can drain wastewater into existing treatment plants; prioritizing new clusters of villages to be served by new sewage networks and new treatment plants; and providing decentralized (standalone) systems in more remote locations where clustering is not economically feasible. This program is backed by a robust master planning process with clear established criteria for selection and prioritization of villages. In each governorate, the criteria used for identification of priority villages include: (i) cost of the treatment plant and of the network; (ii) percentage of planned works already completed; (iii) proximity to waterways, especially canals, drains, lakes, and branches of the Nile; (iv) level of the water table; and (v) population density. The total projected need for the NRSP in order to serve 4,000 villages in both Upper and Lower Egypt has been estimated at 100 billion Egyptian Pounds (circa US\$ 14 billion). About a fifth of this, or US\$2.8 billion, would be needed for the Nile Delta.

At the core of many problems of the water and sanitation sector is the centralized model of decision making, infrastructure investment and service delivery, which favors large national organizations and a separation of infrastructure investment, construction and rehabilitation from management, operation and maintenance of the systems. The existing subsidiary companies at the governorate level that are charged with management, operation and maintenance of the systems are generally very weak. Institutionally, these Water and Sanitation Companies (WSCs) are beholden to the central level organizations from which they have inherited assets which they must manage and maintain. Financially, they are heavily subsidized by the central Government and have no independent authority to raise tariffs which are set nationally. In spite of recent tariff increases implemented since 2004, these have been marginal, on a very low base. Cairo water tariffs are among the lowest in the world even as compared to other mega cities of developing countries. Sewage is charged as a percentage of the water bill and remains very low at 25%. The WSCs are generally over staffed, a fact which is exacerbated by the extent of their unskilled labor force and their inability to recalibrate staffing according to business needs. The subsidiaries are aided by their parent holding company – the Holding Company for Water and Wastewater (HCWW) – which takes the lead on master planning and provides significant technical support to the 25 subsidiaries, for example through assistance to branch water quality labs, training in GIS,

the promotion of water metering, the installation of Scada systems etc. It should be noted that the rapid growth in water supply service coverage has not been accompanied by the establishment of an efficient and decentralized water supply and sanitation sector, exacerbating the vicious cycle of low tariffs, poor services, and low consumer expectations.

Investments to date have been almost solely directed at sanitation infrastructure – in particular sewerage networks and wastewater treatment plants – as opposed to a combination of infrastructure development and performance improvement. In addition, this infrastructure has been expensive relative to other countries at similar levels of GDP. This is due to: (i) the separation of investment from operations as outlined above; (ii) the reliance on construction agencies to select technologies and their associated costs; (iii) the preference for clustering villages and building traditional conveyance and treatment systems; (iv) the great density of rural areas, especially in the Nile Delta, where high water tables compound the problem and reduce other sanitation choices; and (v) the need to comply with stringent environmental and health laws/codes which elevate the discharge standards. In addition, the experience with decentralized systems has not always resulted in lower costs. Relatively large scale conventional treatment systems have been viewed as the only available option to tackle domestic wastewater issues. As a result, high costs (capital, operation and maintenance) on top of low tariffs have further deteriorated the already weak financial performance of the subsidiary companies.

Despite weak subsidiary companies and a fragmented structure, the current arrangements are the result of many layers of reforms that have taken place over the past two decades in particular, starting with the creation of the HCWW and its subsidiary companies by Presidential decree in 2004 and the formulation at that time of a long term vision for a decentralized system of water and wastewater utilities that would both create assets and maintain services. After the 2011 revolution, a national Ministry of Water and Wastewater Utilities was briefly established as a dedicated ministry for the sector but was re-annexed to the Ministry of Housing, Utilities and Urban Development (MHUUD) a year later. The Ministry relies on several agencies and organizations under its supervision, including the regulator – the Egyptian Water Regulatory Agency (EWRA) –and the national construction organizations – the National Organization for Potable Water and Sanitary Drainage (NOPWASD) and the Cairo and Alexandria Potable Water Organization (CAPWO). The Ministry also has control over the activities of the HCWW and its affiliated subsidiary companies. However, the vision for reform remains, not least described in the 2008 National Rural Sanitation Strategy, and the impetus for reforms continues with increasing competition for water, declining water quality, and a tight fiscal situation.

In 2008, the Government of Egypt signed a loan agreement of US\$120 million for the *Integrated Sanitation and Sewerage Project* (ISSIP1). The project targets 1.1 million people in selected villages in the Governorates of *Gharbiya*, *Beheira*, and *Kafr-El-Sheikh* in the *Mahmoudeya* and *Mit-Yazid* drainage basins in the Nile Delta. This first operation was followed by the *Second Integrated Sanitation and Sewerage Project* (ISSIP2) in 2011 with a US\$200 million loan targeting 1.2 million people in four governorates, two in the Delta, namely *Menoufia* and *Sharkeya*, and two in Upper Egypt, namely *Sohag* and *Assiut*. Both projects have been suffering from implementation delays. Although ISSIP1 has recently improved its disbursement, to date, there is no disbursement under ISSIP2.

A number of lessons have been drawn from the Bank engagement in the sector, many of which are noted in the preliminary assessments section and include very specific technical, fiduciary and safeguards lessons like the importance of expediting the process of land acquisition and not excluding nearby villages from targeted clusters. Chief among the lessons, however, is the need to focus on policy and institutional reforms, particularly in view of the fragmentation of the sector and the centralized management described above. Any new program must avoid the pitfalls of trying to weave decisions, planning, funding and approvals among national level organizations and, instead, be anchored around the subsidiary companies, working directly with them, and their parent company, to strengthen their capacity to function as true utilities and to deliver services sustainably over time.

The Government of Egypt has recently launched a new flagship program with the overall goal to foster development, reduce poverty, enhance social inclusion, and improve public health in rural areas. Known as the National Rural Sanitation Program (NRSP), this program is based on the need to connect all of the remaining 4,000 unserved villages to improved sanitation services, primarily through conventional sewerage systems and wastewater treatment plants. The program is based on the clustering approach long promoted through master planning. In addition, the government expects the program to reduce the incidence of diseases related to lack of access to sanitation and enhance the long term sustainability of the Subsidiary Companies. The national government is also working on putting in place the mechanisms and incentives to foster a decentralized model for service provision and investments where the subsidiary companies would manage, operate and maintain sanitation services in rural areas.

### ***C. Relationship to CAS/CPS***

The proposed World Bank support to Egypt's National Rural Sanitation Program is consistent with the Interim Strategy (June 2012 to December 2013) and the proposed Country Partnership Framework (CPF) currently being developed for FY 2015-2019. The Interim Strategy proposes a concrete program of support in which water and wastewater are important parts. Under the pillar of *Inclusion*, the Strategy focuses on the objective of broadening citizen participation in the delivery of water services, and, in order to achieve this objective, by enhancing community based management of decentralized schemes, improving efficiency and equity in service delivery, improving targeting of subsidies, and reducing the cost of pollution through better management of wastewater.

The draft CPF stresses the importance of access to basic services, particularly in rural areas where the combination of dense settlement among the bottom 40 percent of the population and low coverage rates of basic services, including sanitation, may propagate economic disparities. Improved service delivery can enhance inclusion, again particularly so in rural areas where the poor live and where low access, poor service standards, and environment degradation affect them the most. The proposed NRSP and the Bank's support are specifically described in the draft CPF.

In addition, pollution is an important thread throughout the CPF as the deterioration of water quality adds to health and economic burdens. As the CPF stresses, there is a frightening combination of water scarcity (due to steep declines in fresh water availability per capita) and groundwater aquifer pollution as well as heavy surface water pollution of the Nile and its many

branches, canals, and distributaries in the Delta (due to industrial waste, agricultural run-off, seepage from livestock, and untreated rural wastewater).

The NRSP, which has evolved out of the GOE's own successful efforts in the rural water supply sector and the longstanding support provided by the World Bank and other Donors to the rural sanitation sector, is deeply aligned with all of these key issues and therefore with both the Interim Strategy and the CPF. Most importantly, the Bank's entry point through this new engagement will be service delivery for inclusion, which is at the heart of the strategy adopted in both the Interim Strategy and the CPF, and at the heart of the GOE's own request to the Bank.

## **II. Program Development Objective(s)**

### **III. *Program Development Objective(s)***

The proposed Development Objective is to improve the performance of Water Sanitation Companies in managing, operating and maintaining sanitation services in targeted underserved rural areas in the Delta Region.

To this end, the Program will support a three-pronged approach focusing on: (1) Strengthened National Sector Framework to foster a decentralized model for service provision and investments; (2) Improved operational systems and practices of targeted WSCs; (3) Improved investment project cycle management.

### **IV. *Key Program Results***

Below is a list of preliminary results that have been identified to measure achievements. These have been identified based on a preliminary assessment of what it matters to measure and of where the World Bank can most add value and improve the outcomes of the Government program. These are potential results and these will be discussed in detail during preparation with the GoE.

#### **V. *Result Area 1: Strengthened National Sector Framework to foster a decentralized model for service provision and investments***

- a. Introduction of conditional fiscal transfers to Governorates/WSCs
- b. New regulations for quality standards of rural sanitation systems effluents introduced
- c. Issuance of new environmental and social guidelines (including land acquisition)
- d. Issuance of a new tariff policy
- e. Water sector public expenditure review conducted
- f. Preparation of a national strategy for cost effective centralized and decentralized service provision and technologies

#### **VI. *Result Area 2: Improved operational systems and practices of targeted WSCs;***

- a. WSCs that sign water operators partnerships
- b. WSCs that issue performance benchmarking reports
- c. WSCs that implement performance improvement plans

- d. WSCs that improve operational efficiencies (NRW, Collection ratio etc...)
- e. Villages/People receiving 24/7 service from WSCs

**VII. *Result Area 3: Improved investment project cycle management***

- a. Number of village clusters with designs completed and land available
- b. Number of village clusters with sewage networks and treatment plants completed
- c. Number of village clusters serving all significant neighboring villages
- d. Number of villages implementing unconventional sewer systems/treatment plants

All applicable core indicators will be part of the results framework, including: Direct Project Beneficiaries (number), of which female (%), and People provided with access to “improved sanitation facilities” under the project (number).

**VIII. Program Description**

The National Rural Sanitation Program (NRSP) is the overarching program for the rural sanitation sector and aims at achieving 100% coverage of 4,000 villages and 27 subsidiaries with a population estimated at 45 million through access to sanitation services, as well as discontinuation of the practice of discharging untreated sewage into irrigation drains and canals. The investment needs of the NRSP have been estimated at 100 billion E.P. (US\$ 14 billion). The program is structured around a series of rural sanitation Master Plans that are regularly updated by the HCWW (Holding Company for Water and Wastewater).

The strategy supported by the NRSP is based on the centralization of wastewater treatment systems and clustering villages to enhance the technical, economic, environmental and social feasibility of the systems. The pillars of the strategy include: 1) rehabilitation, completion and expansion of existing treatment plants; 2) clustering villages into networks and systems that can be served by existing treatment plants; 3) prioritizing villages that can be economically served by new treatment plants; 4) accelerating service provision where villages are willing to contribute substantially to the capital costs; and 5) promoting decentralized (standalone) systems for remote locations that are not feasible for clustering.

The Master Plans have been designed to meet the demand resulting from future changes in population and demographic trends through 2037 and include an assessment of the current systems and initial identification of investment needs in new infrastructure as well as in renewal and rehabilitation of existing systems. The plans focus on villages of more than 5,000 inhabitants and have proposed a series of priority projects. Clustered approaches have been prioritized to achieve economies of scale when the villages are relatively close, and especially when the solution makes use of existing treatment capacity. In addition, clustered approaches reduce the number of treatment plants needed. Priority has been given to villages located near waterways to reduce pollution loads, as well as to villages with high water table and for highly populated areas.

The proposed Program for Results (PforR) Program will support the NRSP by supporting achievement of a subset of its key results in the Nile Delta through a Delta Rural Sanitation Program (DRSP). In its recent communications with the Bank, the Government has requested it

to support the implementation of the NRSP in the Nile Delta specifically. Given the significant pollution levels in the Delta Area, the Government has given high priority to 769 villages surrounding the *Al Salam Canal* (509 villages) and the *Rosetta Branch* (260 villages). Population in these villages has been estimated at 6.2 million inhabitants. The Nile is particularly important for the Government not only because it is home to 50% of the population but because of the extreme population density (> 1,000 inhabitants per square kilometer), a very high water table (up to 1 meter below ground level), and a very intricately woven and tight web of canals and drains as is characteristic of any Delta. Thus, although absolute poverty rates are higher in Upper Egypt, from a sanitation perspective the problems of Lower Egypt are particularly acute.

The PforR supported Program will be a geographical slice of the national program and will promote institutional reforms aimed at improving the sustainability of the water and sanitation services as envisaged in previous sector reforms attempts but to date only haltingly implemented. It is not yet clear what the full set of activities of the DRSP and the NRSP are, as well in geographic scope but the PforR program envisages to address the existing rural sanitation challenges in a holistic manner by supporting critical infrastructure investments and strengthening the policies and systems. Result Area 1 would include laws, regulations, plans, fiscal policies and decisions that pertain to the efforts at the National Government level to foster a decentralized model for service provision and investments. Results Area 2 would focus on processes and systems to improve the performance of the subsidiary companies, including modern business tools, commercial systems, non-revenue-water reduction, increased community participation, etc. Results Area 3 would strengthen the implementation of the project cycle, from optimization of planning and design of the systems, to improvement of the procurement processes, to efficiency in the construction of the systems.

There are seven governorates, and therefore seven subsidiary companies, in the Delta serving rural areas, namely: Beheira, Gharbiya, Menoufia, Sharkeya, Giza, Damietta and Dakhalia. The DRSP will work with all of them and the DLIs can be triggered for outcomes achieved in any of the seven. Priority villages have been identified for phasing of the DRSP with a first phase of 236 contaminated villages spread across all seven governorates. The task team has discussed prioritization and phasing with the Government and will clarify during preparation. The DLIs will be a mixture of outcomes, outputs, key reforms and Project Action Plan milestones.

To ensure effective implementation of the DRSP, knowing that transfer of implementation accountability will not occur over night from the national construction organizations to the subsidiary companies, one idea for implementation is the creation of a transitional Program Management Unit (PMU) to be established within the Ministry of Housing, Utilities and Urban Communities (MHUUC). At the same time, experience has also shown that there are risks in setting up entities that could in time morph into parallel government structures. For this reason, the PMU has been envisaged as a transitional entity so that the program of activities for subsidiary support. As Program implementation advances, the PMU will support institutional capacity building and development that will ensure the gradual transfer of PMU responsibilities and functions to the subsidiary companies. Given the complex and multi-dimensional nature of the Program, as well as its implementation challenges, the PMU would be assisted by an Implementation Support Consultant (ISC) that could be a firm with relevant national and international experience, that would play an essential role in overall program management and

coordination and ensure the effective interaction with the subsidiary companies that will ultimately bear the responsibility for decision making and operation of the systems supported by the program.

## **IX. Initial Environmental and Social Screening**

The Bank has been engaged in the delivery of ISSIP 1 and ISSIP 2. Both projects involved a very similar set of impacts and risks as the set anticipated from the new sanitation operation. For the new PforR, an Environmental and Social System Assessment (ESSA) will be prepared. The ESSA will examine the scope, context and potential impacts of the Program from an environmental and social perspective. It will entail the review of environmental and social management systems and of the implementing capacities of the respective government agencies participating in the Program and evaluate their consistency with the core principles and attributes specified in the OP 9.00. The content of the ESSA will include, but not be limited to: (i) a brief description of the Program, including the objectives, relationships between government's Program and the PforR; (ii) potential environmental and social risks, impacts and benefits, including any potential issues related to land acquisition; (iii) institutional arrangements and mechanisms in place to deal with the potential environmental and social risks; (iv) identification of areas in which the implementing entities should improve procedures and performance (which may be expressed through the PAP and the DLIs as necessary); and (v) inputs to the integrated risk assessment.

The assessment of the existing system will investigate the adequacy of local legislation, policies, guidelines and actual practices on the ground as well as the relevant capacities of agencies in addressing environmental and social issues. This will include analysis of the existing EIA system, effluent discharge standards, sludge management standards and public health standards along with the performance of existing institutions in complying with such standards. The analysis will also examine the procedures and the institutional arrangements to acquire land for the WWTP and the pumping stations and the mechanisms for consultation, information sharing and engaging the local beneficiaries. It will also examine the current arrangements for the integration of vulnerable groups including poor families, as well as the participation and social accountability practices. Social risks will also be examined, including the risks associated with land acquisition procedures, such as willing buyer-willing seller and land donation, which have caused major implementation delays in the past and had negative social impacts in communities. Consultations will be carried out with various stakeholders during the preparation of the ESSA. The draft ESSA will be disclosed in compliance with OP/BP 9.0.

Although they are not envisaged, the program interventions will be carefully screened to assess if any Category A-type interventions are included. Such interventions will not be part of the program, as stipulated in the OP/BP 9.0, and accordingly the team will make sure that planned interventions do not cause any significant adverse environmental impacts that are sensitive, diverse or unprecedented and that such impacts are site specific, mostly reversible and could be effectively mitigated with local resources.

## **X. Tentative financing**

Source:

(\$m.)

Borrower/Recipient  
IBRD  
IDA  
Others (specify)

500

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